

WHAT IS CLAIMED IS:

1. A method, comprising:  
receiving an instruction to adjust the output power of power amplifier;  
powering on or off at least one branch of the power amplifier according to the received instruction to enable a logarithmic change in output power of the amplifier; and  
amplifying a signal according to the adjusted output power.
2. The method of claim 1, further comprising transmitting the amplified signal.
3. The method of claim 1, wherein the instruction specifies a percentage change in power.
4. The method of claim 1, wherein the instruction specifies a dB change in power.
5. The method of claim 1, wherein the powering on or off a branch of the power amplifier linearly in dB changes the output power of the amplifier.
6. The method of claim 1, wherein thermometer coded power control words are used to power on and off branches of the amplifier.
7. The method of claim 6, wherein the thermometer coded power control words ensure monotonic power control.

8. A system, comprising:
- means for receiving an instruction to adjust the output power of power amplifier;
  - means for powering on or off at least one branch of the power amplifier according to the received instruction to enable a logarithmic change in output power; and
  - means for amplifying a signal according to the adjusted output power.
9. A system comprising:
- a receiving engine capable of receiving an instruction to adjust the output power of power amplifier; and
  - a determining engine, communicatively coupled to the receiving engine, capable of determining how many branches of a power amplifier to power on or off according to the received instruction to enable a logarithmic change in output power; and
  - a power amplifier engine, communicatively coupled to the determining engine and the power amplifier, capable of transmitting the determination to the power amplifier.
10. The system of claim 9, wherein the instruction specifies a percentage change in power.
11. The system of claim 9, wherein the instruction specifies a dB change in power.
12. The system of claim 9, wherein powering on or off a branch of the power amplifier linearly changes in dB the output power of the amplifier.

13. The system of claim 9, wherein the power amplifier engine uses thermometer coded power control words to power on and off branches of the amplifier.
14. The system of claim 13, wherein the thermometer coded power control words ensure monotonic power control.
15. A power amplifier, comprising:  
a plurality of branches for controlling transistors; and  
a plurality of transistors, each transistor being communicatively coupled to a branch of the plurality of branches,  
wherein the transistors are arranged in a logarithmic scale, thereby enabling a logarithmic change in output power with the powering on or off of a transistor.
16. The power amplifier of claim 15, wherein the powering on or off a branch of the power amplifier linearly in dB changes the output power of the amplifier.
17. A transmitter comprising a power amplifier according to claim 15.